

## **REMARKS**

Claims 1-27 are pending. The prior rejections of claims 1-27 under 35 U.S.C. §§ 101, 102 and 103 have been maintained in the present Office Action. The Office Action has been made final. Reconsideration is respectfully requested.

### **Telephonic Interview**

The undersigned wishes to thank Examiner Morrison for the courtesies extended during the telephonic interview conducted on April 26, 2007. During the interview, the following arguments were presented and discussed.

### **Rejections Under 35 U.S.C. § 101**

The Office Action maintains the prior rejection of claims 1-26 under Section 101. The Office Action asserts that “the claims are useful and concrete, but they fail to produce a tangible result because no result is stored in a non-volatile medium nor, for example, reported to a user.” Office Action, ¶ 3. The Applicants respectfully disagree.

According to paragraph 3 of the Office Action, “[a] useful, concrete, and tangible result must be either specifically recited in the claim *or flow inherently therefrom*.” (emphasis added). “To be concrete the claimed invention must be able to produce the same results given the same initial starting conditions.” “To be tangible the claimed invention must produce a practical or real world result.” The claimed invention meets all of these requirements.

Enforcing the contract recited in the claims against any given class will always produce the same result with respect to that class. If the class does not meet the requirements of the contract, it will be prevented from executing every time the contract is applied against it. Similarly, if the class meets the requirements of the contract, it will be permitted to execute, every time. Thus, given the same initial starting conditions (*i.e.*, a given class), the claimed invention will produce the same results, every time.

Moreover, the result is certainly “practical” and “real world” and therefore tangible. What is more “practical” and “real world” than preventing the code of a given class from executing if it fails to satisfy the requirements of the recited contract? It certainly has a

practical and real world effect on the user of a computer system in which the invention is implemented. If the code meets the requirements of the contract, objects that are instances of the user defined aggregate will be instantiated, computed and stored in the system. That certainly is a “practical” and “real world” result.

In view of the foregoing, the Applicants respectfully submit that “[a] useful, concrete, and tangible result” is recited in the claims and/or does flow inherently from it. Reconsideration of the Section 101 rejection of claims 1-26 is respectfully requested.

### **Rejections under 35 U.S.C. §§ 102 and 103**

The Office Action maintains the rejection of claims 1-4, 8-9, 12-17, 21-22 and 25-27 under Section 102(b) on the ground that they are anticipated by Schallehn et al. The section 103(a) rejection of claims 5-7, 10-11, 18-20 and 23-24 over Schallehn in combination with either Kriens or Berg has also been maintained. Reconsideration is respectfully requested.

Claim 1 is asserted to be anticipated by Schallehn primarily based on the description of the “interface UDG, at page 548, column 2, paragraphs 4-6.” Office Action, ¶ 5, pp. 3-4. However, those paragraphs describe a class for creating a “user defined grouping (UDG),” not a user-defined aggregate. *See*, p. 548, column 1, last paragraph. During the interview, the undersigned and the Examiner did discuss the first two paragraphs of the second column of page 548, and the Examiner indicated the present rejection may be maintained based on that portion of the reference. Nevertheless, the Applicants submit that various features of the dependent claims are neither taught nor suggested by Schallehn.

In particular, with respect to claim 2, the Office Action did not accord any patentable weight to the phrase “for persisting instances of the user-defined aggregate in a database store” on the ground that this phrase merely indicates “intended use.” After discussion during the interview, claim 2 has been amended to instead recite “one of a plurality of different formats which describes how for persisting instances of the user-defined aggregate are to be persisted in a database store.” As explained in the specification at ¶ 0064, the claimed formats are those “that the SQL engine will use to store instances of the user-defined aggregate on disk.” Specification, ¶ 0064. Schallehn does not disclose a “contract” that requires a user-defined aggregate class to specify any such formats. Indeed, the portion of Schallehn to which the Office Action refers relates to “context-aware grouping,” and does not

appear to describe formats of any kind. Reconsideration of the Section 102(b) rejection of claim 2 is requested.

With respect to claim 3, which recites that the contract further comprises a requirement that the class comprise a fourth method that is invoked to merge an instance of the user-defined aggregate with another partial aggregation, the Office Action again cites to page 548, second column, paragraphs 4 or 5 of Schallehn. But, again, that portion of Schallehn is discussing a user-defined grouping, not an aggregate. Moreover, the Applicants do not understand how the cited portion teaches any method that is invoked to *merge* an instance of a user-defined aggregate with another partial aggregation, as described in the Specification at paragraph 0033 and recited in this claim. During the interview, it was pointed out that neither of the UDA or UDG “interfaces” on page 548 of Schallehn show such a method. Reconsideration of the Section 102(b) rejection of claim 3 is respectfully requested for these reasons.

With respect to claim 12, that claim recites that the class defining a user-defined aggregate further comprises one of several attributes. During the interview, the Examiner expressed concern about phrasing this aspect of the invention as “the class ... comprising one of” the listed attributes. The undersigned pointed out that this claim is directed to the feature by which a class definition can be “annotated” to specify the recited attributes as shown for example in Fig. 2A in the lines that begin “[SqlUdAgg ( ...)]”. This feature of the invention is described in paragraphs 0044 to 0050 of the specification. To address the Examiner’s concern, this claim has been amended to recite that “the class ... ~~comprising~~ is annotated to specify one of” the listed attributes. The Applicants submit that this feature of the invention is not shown in Schallehn. The Office Action again cites to page 548, column 2, paragraphs 4 – 6, asserting that each recited attribute is disclosed in that portion of the reference. The applicants have reviewed the cited portion but do not believe that it discloses any of the recited attributes. Moreover, this portion of the reference describes a user-defined grouping, not a user-defined aggregate. Reconsideration of the Section 102 (b) rejection of this claim is respectfully requested.

With respect to claim 13, which recites determining a method of computation of an instance of the user-defined aggregate based at least in part upon a value of said one of said attributes, the Office Action cites to page 549, first column, paragraphs 1 – 3. Again, the

**DOCKET NO.:** MSFT-3027/307008.01  
**Application No.:** 10/775,982  
**Office Action Dated:** February 28, 2007

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Applicants cannot find any reference to the kinds of attributes recited in claim 12 in this portion of the Schallehn reference. Reconsideration of the rejection of this claim is also respectfully requested.

Inasmuch as independent claim 14 and its respective independent claims recite features corresponding to those recited in one of the claims discussed above, the Applicants respectfully request reconsideration of the rejection of those claims for the same reasons.

Inasmuch as the remaining claims depend either directly or indirectly from one of independent claims 1 or 14, or from one of the dependent claims discussed above, the Applicants respectfully submit that they too are patentable over Schallehn or any of the other cited art of record.

### **CONCLUSION**

For all the foregoing reasons, the Applicants respectfully submit that the application is now in condition for allowance. Reconsideration of the present grounds of rejection and an early Notice of Allowance are respectfully requested.

Date: April 27, 2007

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